

AMENDMENTS TO THE CLAIMSListing of claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) An electronic transmission ~~device~~ apparatus, comprising:

a first and a second communication means to be connected to a signal transmission line, wherein said signal transmission line interconnects a transmitting electronic device and a receiving electronic device;

~~an authentication process means for executing an~~ a first authentication process with a first ~~said transmitting electronic device of a signal transmitting side through at least~~ via said first communication means;

a decryption means for decrypting an encrypted signal transmitting by said transmitting electronic device; and

a processing means for executing an operation process with a decrypted signal obtained by decrypting a said encrypted signal at said decryption means, wherein

said authentication process means supplies key information for decrypting said encrypted signal supplied from said ~~first transmitting~~ transmitting electronic device based on a result of said first authentication process;

said first communication means supplies said encrypted signal supplied from said ~~first transmitting~~ transmitting electronic device connected through said signal transmission line to said

decryption means and said second communication means, and

said second communication means enables ~~a connected second~~  
said receiving electronic device ~~of a signal receiving side to~~  
~~transmit~~ to receive said encrypted signal and said key  
 information and to execute ~~an~~ a second authentication process  
 with said ~~second~~ receiving electronic device;

encryption means for re-encrypting said decrypted signal and  
for supplying said re-encrypted signal to said second  
communication means; and

signal switching means for selecting for output to said  
second communication means one of said encrypted signal  
transmitted by said transmitting electronic device and said re-  
encrypted signal by said encryption means in response to said  
second authentication process.

2. (Currently Amended) The electronic transmission ~~device~~  
apparatus according to claim 1, wherein

said authentication process means supplies key information  
 for authentication of said ~~second~~ receiving electronic device and  
 decryption of said encrypted signal from said ~~first~~ transmitting  
 electronic device to said ~~second~~ receiving electronic device  
 based on a result of said second authentication process.

3. (Cancelled).

4. (Currently Amended) The electronic transmission ~~device~~  
apparatus according to claim 3 1, wherein

said authentication process means executes ~~an~~ said second authentication process with said ~~second~~ receiving electronic device through said second communication means and supplies to said ~~second~~ receiving electronic device said key information for decrypting said signal selected by said signal ~~selection~~ switching means based on a result of said second authentication process.

5. (Currently Amended) The electronic transmission device apparatus according to claim 4, wherein

a signal selecting operation of said signal ~~selection~~ switching means is executed ~~base~~ based on a selection signal supplied from said ~~first~~ transmitting electronic device through said first communication means.

6. (Currently Amended) The electronic transmission device apparatus according to claim 4, further comprising:

~~an~~ operation input means for conducting ~~an~~ a switching operation of said signal ~~selection~~ switching means.

7. (Currently Amended) A signal transmission method comprising the steps of:

executing ~~an~~ a first authentication process with a ~~first~~ transmitting electronic device ~~of a signal transmission side~~ connected ~~through~~ via a signal transmission line for connecting said ~~first~~ transmitting electronic device and a ~~second~~ receiving electronic device;

executing an operation ~~processing~~ by process using a decrypted signal obtained by decrypting an encrypted signal supplied from said ~~first~~ transmitting electronic device with key information supplied from said ~~first~~ transmitting electronic device based on a result of said first authentication process;

executing ~~an~~ a second authentication process with said ~~second~~ receiving electronic device ~~for signal reception~~ connected ~~through~~ via said signal transmission line ~~or execution of a relay~~ ~~for such authentication process;~~

~~transmitting said encrypted signal supplied from said first electronic device; and~~

~~transmitting said key information for decrypting said encrypted signal based on the result of said authentication process;~~

re-encrypting said decrypted signal; and

selecting for transmission to said receiving electronic device one of said encrypted signal and said re-encrypted signal in response to said second authentication process.

8-9 (Cancelled).

10. (Currently Amended) The signal transmission method according to claim 8 7, wherein

said ~~selection~~ selecting of either said re-encrypted signal or said encrypted signal supplied from said ~~first~~ transmitting electronic device is executed based on a signal supplied from said ~~first~~ transmitting electronic device.

11. (Currently Amended) The signal transmission method according to claim 8 7, wherein

said ~~selection~~ selecting of either said re-encrypted signal or said encrypted signal supplied from said ~~first~~ transmitting electronic device is executed based on an operation result of an operation input means.

12-17 (Cancelled).